R E M A R K S

Claims 3, 4 and 8-40 are pending in this application.

[I] Issues under 35 U.S.C. 102(b)

Claims 3, 4, and 8-40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by any of Nudenberg et al., GB '467, WO '567, GB '031, GB '597, GB '434, FR '571, EP '120, Nakagawa et al., Kasatkin et al.

Applicant respectfully traverses each of the rejections.

[I-A] Advantages of the Present Invention -

The features of the present invention are varied and are described in each of independent claims 3, 8, 11, 12, 22, 23 and 25-30. The following three items include some of the features of the present invention that are patentable over the prior art.

(1) A first aspect of the invention resides in a process comprising reacting a titanium compound and a Grignard reagent for producing a titanium catalyst for a small molecule reaction, which is **not** a polymerization reaction, wherein said small molecule reaction is between a compound having a carbon-carbon unsaturated bond and a compound having an electrophilic functional group or an electrophilic reagent.

(2) A second aspect of the invention resides in a process which comprises reacting a titanium compound, a Grignard reagent and a compound having a carbon-carbon unsaturated bond, for producing an organotitanium reacting agent which is **not** used in a polymerization reaction.

(3) A third aspect of the invention resides in a process for an addition reaction, which is **not** a polymerization reaction, wherein said addition reaction comprises combining a compound having a carbon-carbon unsaturated bond and a compound having an electrophilic functional group or an electrophilic reagent, in the presence of a titanium compound and a Grignard reagent.

An important aspect of each of items 1-3 above, is that the titanium catalyst (formed of a titanium compound and a Grignard reagent) is not used in a polymerization reaction, but is used between a compound having a carbon-carbon unsaturated bond and a compound having an electrophilic functional group or an electrophilic reagent.

The present inventor has performed intensive studies to obtain the inventive titanium catalyst that can be used in similar reactions to that of a zirconocene and titanocene catalysts. Advantages of the inventive titanium catalyst over

the zirconocene and titanocene catalysts include an improved reactivity and lower cost.

The above features of the present invention are described to highlight the distinctions between the present invention and the cited references.

[I-B] WO '567 -

WO '567 discloses catalytic asymmetric reduction process of trisubstituted olefins and enamines. The reduction process can be carried out in the presence of both hydrogen and an asymmetric catalyst including a titanium compound etc. Also, WO '567 discloses that the catalyst containing a titanium compound may need to be activated by reaction with an alkylating agent such as alkyl magnesium halides, alkyl lithium and so on.

Applicant respectfully submits that the inventive process is patentable over WO '567, since the process of WO '567 requires the use of hydrogen as a co-reactant whereas the present process does not include hydrogen as a co-reactant. Hydrogen is neither a compound having an electrophilic functional group nor an electrophilic reagent as required by the inventive claims. In other words, the function of the catalyst in the present invention is quite different from the asymmetric catalyst described in WO '567.

In describing the requirements for rejection of a claim by anticipation, the Manual of Patent Examining Procedure (Section 2131) states:

> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference (ref. omitted). The identical invention must be shown in as complete detail as is contained in the... claim (ref. omitted)."

Furthermore, in *Ex Parte Levy*, 17 USPQ2d 1461 (BOPAI, 1990), the Board of Patent Appeals and Interferences has written:

> "Moreover, it is incumbent upon the Examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference (ref. omitted)."

Accordingly, the present invention is not anticipated by WO '567, since WO '567 fails to teach a process for producing a titanium catalyst for the reaction between a compound having a carbon-carbon unsaturated bond and a compound having an electrophilic functional group or an electrophilic reagent *in the absence of hydrogen*. As such, withdrawal of the rejection is respectfully requested.

[I-C] Nudenberg et al., GB '467, GB '031, GB '597, GB '434, FR '571 and EP '120 -

Nudenberg et al., GB '467, GB '031, GB '597, GB '434, FR '571, and EP '120 disclose the polymerization reaction process

that uses a catalyst with a titanium compound such as a Ziegler type catalyst.

However, since the present invention does not include the polymerization reaction process, the present invention differs from the processes described in these cited patents. That is, the function of the titanium catalyst in the present invention and the catalysts in the cited patents is completely different.

As mentioned above, every element in a claim must be found in a reference in order that the reference anticipate the claim. Since none of these cited references teach or suggest that the titanium compound catalyst can be used in a non-polymerization reaction, the presently claimed invention is not anticipated by the cited references. As such, withdrawal of each of the rejections are respectfully requested.

[I-D] Nakagawa and Kasatkin -

Applicant respectfully submits that these references are not prior art to the present invention. The publication date of Nakagawa is May 1, 1995 and the publication date of Kasatkin is August 21, 1995, whereas the instant priority document JP 7-79685 has a filing date of March 10, 1995. Accordingly, withdrawal of the rejection is respectfully requested.

C O N C L U S I O N

In view of the above-remarks, Applicants respectfully submit that the claims, as presently amended, are patentable. A Notice to such effect is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Garth M. Dahlen (Reg. No.43,575) at the telephone number of the undersigned below.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a one (1) month extension of time for filing a reply in connection with the present application, and the required fee of $$110.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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